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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/823,440	04/12/2004	Ronald A. Askeland	200208109-1	4843

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EXAMINER

SHAH, MANISH S

ART UNIT	PAPER NUMBER
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2853

DATE MAILED: 04/04/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

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<b>Office Action Summary</b>	Application No. 10/823,440	Applicant(s) ASKELAND ET AL.	
	Examiner Manish S. Shah	Art Unit 2853	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-39 is/are pending in the application.  
     4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-39 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
     a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>4/12/04; 10/4/05</u> . | 6) <input type="checkbox"/> Other: ____.  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kato et al. (# US 6439708) in view of Smith et al. (# US 6270214) and Wen (# US 6428157).

Kato et al. discloses an inkjet recording system including a first printhead containing a fixer composition (anionic second liquid) including a charged fixer component, said first printhead configured for ink-jet printing the fixer composition on a substrate (element: 1, 1b; figure: 5); b) a second printhead containing an ink-jet ink, said second printhead configured for ink-jet printing the ink-jet ink composition over the fixer composition (element: 1, 1c, figure: 5), said ink-jet ink including a colorant carrying an opposite charge with respect to the charged fixer component (column: 15, line: 55-66; column: 16, line: 1-66); and c) a third printhead containing a polymer overcoat composition (cationic first liquid), said third printhead configured for ink-jet printing the polymer overcoat composition over ink-jet ink composition (element: 1d, figure: 5), wherein the polymer of the polymer overcoat composition also carries an opposite

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charge with respect to the charged fixer component (column: 15, line: 29-55; column: 3, line: 60-65; column: 4, line: 1-20).

- The charged fixer component (second liquid) is an anionic fixer composition (anionic polyvalent salt) (column: 13, line: 30-40), the colorant is an anionic or a cationic colorant (column: 15, line: 55-67; column: 16, line: 1-25; column: 18, line: 20-30), and the polymer overcoat composition is a cationic polymer overcoat composition (column: 6, line: 26-30).

- The fixer composition includes a first liquid vehicle and a multivalent salt (column: 15, line: 29-37; column: 13, line: 30-50).

- The fixer composition includes a first liquid vehicle and an organic acid (column: 13, line: 50-65).

- The ink-jet ink includes a second liquid vehicle and a dye (column: 15, line: 55-65).

- The ink-jet ink includes a second liquid vehicle and a pigment (column: 15, line: 55-67; column: 16, line: 1-10).

- The polymer overcoat composition includes a third liquid vehicle and polymeric particulates, wherein the polymer overcoat composition includes a resin emulsion. They also disclose that the particle diameter of polymer particle is not more than 150 nm (column: 5, line: 45-62).

Kato et al. differs from the claim of the present invention is that (1) the fixer composition includes a first liquid vehicle and a charged polymer, wherein the charged polymer is a cationic polymer selected from the group consisting of poly(vinyl pyridine)

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salts, polyalkylaminoethyl acrylates, polyalkylaminoethyl methacrylates, poly(vinyl imidazole), polyethyleneimines, polybiguanides, and polyguanides, and combinations thereof. (2) The charged fixer component is a cationic fixer composition, the colorant is an anionic or cationic colorant and overcoat composition is an anionic polymer, wherein an anionic polymer includes latex dispersion. (3) The polymeric particulates comprise a plurality of randomly polymerized monomers, and wherein the weight average molecular weight of the polymeric particulates is from about 5,000 Mw to 2,000,000 Mw.

Smith et al. teaches that to get the water fastness, bleed free and feathering free printed image, inkjet recording method using inkjet recording system including the fixer composition includes a first liquid vehicle and a charged polymer, wherein the charged polymer is a cationic polymer is polyethyleneimines (column: 18, line: 34-37). They also teach that the charged fixer component is a cationic fixer composition (column: 18, line: 54-60), the colorant is an anionic colorant or a cationic colorant (column: 20, line: 55-65). They also teaches that the polymeric particulates comprise a plurality of randomly polymerized monomers, and wherein the weight average molecular weight of the polymeric particulates is from about 500 Mw to 30000 Mw (column: 16, line: 11-16).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the fixing composition in the inkjet recording system of Kato et al. by the aforementioned teaching of Smith et al. in order to have the water fastness, bleed free and feathering free printed image.

Wen teaches that to get the durable printed image, over coat the printed image with the anionic polymeric composition, wherein anionic polymeric composition includes latex dispersion (column: 4, line: 36-43).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the over coat composition the inkjet recording method of Kato et al. by the aforementioned teaching of Wen in order to have durable printed image.

2. Claims 15-26 & 29-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kato et al. (# US 6439708) in view of Smith et al. (# US 6270214) and Wen (# US 6428157).

Kato et al. discloses a durable printed image and a method for printing durable inkjet ink image including the step of jetting an anionic fixer composition (second liquid) to a media substrate; jetting an ink jet ink composition onto the fixer composition, wherein ink includes cationic or anionic colorant; and jetting cationic polymer (first liquid) overcoat composition over ink-jet ink composition (column: 15, line: 29-55; column: 3, line: 60-65; column: 4, line: 1-20).

- The fixer composition includes a first liquid vehicle and a multivalent salt (column: 15, line: 29-37; column: 13, line: 30-50).

- The fixer composition includes a first liquid vehicle and an organic acid (column: 13, line: 50-65).

- The ink-jet ink includes a second liquid vehicle and a dye (column: 15, line: 55-65).

- The ink-jet ink includes a second liquid vehicle and a pigment (column: 15, line: 55-67; column: 16, line: 1-10).

- The polymer overcoat composition includes a third liquid vehicle and polymeric particulates, wherein the polymer overcoat composition includes a resin emulsion. They also disclose that the particle diameter of polymer particle is not more than 150 nm (column: 5, line: 45-62).

Kato et al. differs from the claim of the present invention is that (1) the fixer composition includes a first liquid vehicle and a charged polymer, wherein the charged polymer is a cationic polymer selected from the group consisting of poly(vinyl pyridine) salts, polyalkylaminoethyl acrylates, polyalkylaminoethyl methacrylates, poly(vinyl imidazole), polyethyleneimines, polybiguanides, and polyguanides, and combinations thereof. (2) The charged fixer component is a cationic fixer composition, the colorant is an anionic colorant and overcoat composition is an anionic polymer, wherein anionic polymer includes latex dispersion. (3) The polymeric particulates comprise a plurality of randomly polymerized monomers, and wherein the weight average molecular weight of the polymeric particulates is from about 5,000 Mw to 2,000,000 Mw.

Smith et al. teaches that to get the water fastness, bleed free and feathering free printed image, inkjet recording method using inkjet recording system including the fixer composition includes a first liquid vehicle and a charged polymer, wherein the charged polymer is a cationic polymer is polyethyleneimines (column: 18, line: 34-37). They also teach that the charged fixer component is a cationic fixer composition (column: 18, line: 54-60), the colorant is an anionic colorant or a cationic colorant (column: 20, line: 55-

65). They also teaches that the polymeric particulates comprise a plurality of randomly polymerized monomers, and wherein the weight average molecular weight of the polymeric particulates is from about 500 Mw to 30000 Mw (column: 16, line: 11-16).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the fixing composition in the inkjet recording system of Kato et al. by the aforementioned teaching of Smith et al. in order to have the water fastness, bleed free and feathering free printed image.

Wen teaches that to get the durable printed image, over coat the printed image with the anionic polymeric composition, wherein anionic polymeric composition includes latex dispersion (column: 4, line: 36-43).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the over coat composition the inkjet recording method of Kato et al. by the aforementioned teaching of Wen in order to have durable printed image.

3. Claims 27-28 & 38-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kato et al. (# US 6439708) in view of Smith et al. (# US 6270214).

Kato et al. discloses a method for printing durable inkjet ink image including the step of jetting an anionic fixer composition (second liquid) to a media substrate; jetting an ink jet ink composition onto the fixer composition, wherein ink includes acid dye or base dye and jetting cationic polymer (first liquid) overcoat composition over ink-jet ink composition (column: 15, line: 29-55; column: 3, line: 60-65; column: 4, line: 1-20).



Kato et al. differs from the claim of the present invention is that the colorant is a cationic colorant.

Smith et al. teaches that to get the water fastness, bleed free and feathering free printed image, inkjet recording method using inkjet recording system including the colorant, which is an anionic colorant or a cationic colorant (column: 20, line: 55-65).


It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the fixing composition in the inkjet recording system of Kato et al. by the aforementioned teaching of Smith et al. in order to have the water fastness, bleed free and feathering free printed image.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Manish S. Shah whose telephone number is (571) 272-2152. The examiner can normally be reached on 8:00am-4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen D. Meier can be reached on (571) 272-2149. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Manish S. Shah  
Primary Examiner  
Art Unit 2853

MSS

3/30/06